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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,765	01/12/2004	John L. Schantz	200309946-1	9615

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EXAMINER	
TEDOM, CLEMENT N	
ART UNIT	**PAPER NUMBER**
2609	

MAIL DATE	DELIVERY MODE
06/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/755,765	SCHANTZ, JOHN L.	
	Examiner	Art Unit	
	Clement N. Tedom	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01/12/04* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim4, 11, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, 11,and 23 recites the limitation wherein "said X represents a number of CPU to be load distributed in said multi-CPU receiving node, said X represents a base value for said modulo operation". The applicant gives different definition for X.

For further examination, the examiner will consider only one definition, which is "X represents a number of CPU to be load distributed in said multi-CPU receiving node"

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims1-14, 20-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Delaney et al Patent No 6795546, hereinafter (Delaney)

With respect to claim 1

Delaney teaches In a multi-CPU receiving node of a network (See figure 4 and column5, line10-18), a method for routing a SCCP (Signaling Connection Control Part) message to a specific CPU in said multi-CPU receiving node, comprising (See column 3,line 55-61,where message can be a SCCP message):

applying a mathematical function to information received in said SCCP message to obtain a result, said information including a first value obtained in a first field of said SCCP message and a second value obtained in a second field of said SCCP message (See column 4, lines 10-13, where information from a first and second field of the SCCP message are used to calculate a sequence value, which in turn is used in a calculation to obtain a result for the Offset value. Also see equation 1 on column 8, which is applied to information received); and employing said result to route said SCCP message to said specific CPU (See column 8, where the offset value, which in turn is used in fig 7, step ST4-7 to determine specific processor, and in step ST8, the message is routed to the designated processor)

With respect to claim 2 and 5

Delaney teaches the limitation of claim1 for the reason above

Delaney further teaches first value represents a Signaling Link Selection (SLS) value; said second value represents an OPC (Originating Point Code) value. (See column 4, lines 10-14, where message comprise a SLS value and an OPC value)

With respect to claim 3

Delaney teaches the limitation of claim 2 for the reason above

Delaney further teaches applying includes performing a modulo operation on said first value and said second value (see column 8, lines 55-60, where SLS and OPC are added)

With respect to claim 4

Delaney teaches the limitation of claim 3 for the reason above

Delaney further teaches modulo operation is Mod(x) (Y + Z)

wherein said X represents a number of CPU to be load distributed in said multi-CPU receiving node, said X represents a base value for said modulo operation, said Y represents said SLS value, said Z represents said OPC value, and said Y+Z represents an operand for said modulo operation. (Column 10, lines 55-65, where SLS and OPC are binary added to determine the offset value needed to select the appropriate processor, also see equation 1 in column 8, where offset value is based on the number E of equipped processor associated with a service)

With respect to claim 6

Delaney teaches the limitation of claim 3 for the reason above

Delaney further teaches a mathematical function represents a function that provides a deterministic result when said first value is a first specific number and said second value is a second specific number (See column 8, line 55-60, where sequence identifier (v), which is a deterministic value, as it allow to calculate the offset value); is calculated by adding the OPC and SLS).

With respect to claim 7

Claim 7 appears to recite the same limitation as claim 1 and 6 combine, except for a programmable logic device comprise inside the multi-CPU node that perform the above-mentioned limitation.

Delaney disclose a multi-CPU node in a network communication that comprise programmable logic modules, integrated circuits, software and processor that perform the above mentioned limitations. (See fig 4,5 for the multi-CPU nodes, as well as column 5, lines 10-30, where a description of the node is given as well as its function)

With respect to claim 8

Delaney teaches the limitation of claim 7 for the reason above

Claim 8 appears to recites the same limitation as claim 6, except for the programmable logic to perform the above limitation

Delaney discloses a multi-CPU node in a network communication that comprises programmable logic modules that perform the above-mentioned limitations. (See fig 4,5 for the multi-CPU nodes, as well as column 5, lines 10-30, where a description of the node is given as well as its function, also see claim 26)

With respect to claim 9 and 10

Delaney teaches the limitation of claim 8 for the reason above

Delaney further teaches said second value represents an OPC (Originating Point Code) value, and first value represents a Signaling Link selection (SLS) (See column 4, lines 10-14, where message comprise a SLS value and a OPC value)

With respect to claim 11

Delaney teaches the limitation of claim 10 for the reason above

Claim 11 appears to recites the same limitation as claim 4, except for the programmable logic to perform the above limitation

Delaney discloses a multi-CPU node in a network communication that comprises programmable logic modules that perform the above-mentioned limitations. (See fig 4,5 for the multi-CPU nodes, as well as column 5, lines 10-30, where a description of the node is given as well as its function, also see claim 26)

With respect to claim 12

Delaney teaches the limitation of claim 7 for the reason above

Delaney further teaches performing a table look up which is related to the deterministic value (See column 10, lines 60-66, as well as column 9, lines 10-15,line 22-26). It is inherent that the program to perform the table look up is store in a programmable logic (See column 5, lines 10-30)

With respect to claim 13 and 14

Delaney teaches the limitation of claim 12 for the reason above

Delaney further teaches said second value represents an OPC (Originating Point Code) value, and first value represents a Signaling Link selection (SLS) (See column 4, lines 10-14, where message comprise a SLS value and a OPC value)

With respect to claim 20

Claim 20 appears to recites the same limitation as claim 1, except for an article of manufacture comprising a storage device having readable code to perform the above limitation.

Delaney disclose a network node comprising memory which have software residing in them to perform the above limitation (See fig 4,5, as well as column 5, lines 15-30)

With respect to claim 21 and 24

Delaney teaches the limitation of claim 20 for the reason above

Delaney further teaches first value represents a Signaling Link Selection (SLS) value; said second value represents an OPC (Originating Point Code) value. (See column 4, lines 10-14, where message comprise a SLS value and an OPC value)

With respect to claim 22

Delaney teaches the limitation of claim 20 for the reason above

Claim 22 appears to recites the same limitation as claim 3

With respect to claim 23

Delaney teaches the limitation of claim 22 for the reason above

Claim 23 appears to recites the same limitation as claim 4

With respect to claim 25

Delaney teaches the limitation of claim 20 for the reason above

Claim 25 appears to recites the same limitation as claim 6

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

> subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delaney et al Patent No 6795546, hereinafter (Delaney), further in view of Grewal et al, Patent No 5592672, (hereinafter Grewal)

With respect to claim 15

Delaney teaches In a multi-CPU receiving node of a network (See figure 4 and column5, line10-18), a method for routing a SCCP (Signaling Connection Control Part) message to a specific CPU in said multi-CPU receiving node, comprising (See column 3,line 55-61,where message can be a SCCP message):

applying a mathematical function to information received in said SCCP message to obtain a result, said information including a first value obtained in a first field of said SCCP message (See fig 7,where after message is received on step ST1, a first field

and a second field information are computed on step ST4 and ST5, as well as equation 1 on column 8, applied to information received)

Delaney further teaches said mathematical function further ensuring that messages belonging to a given SCCP message stream are routed to a single CPU of said multi-CPU receiving node; and employing said result to route said SCCP message to said specific CPU. (See fig 7, step ST6 where offset value of message from SCCP are used to select processor, and step ST8, where message is routed to selected processor).

Delaney does not teach said mathematical function ensuring that a load on any CPU in said multi-CPU receiving node differs by no more than 25% when sampled over a continuous 24-hour period from a load on any other CPU in said multi-CPU receiving node that is designated for load sharing SCCP message processing,

Grewal, which is in the same field of endeavor, (System for load balancing between message processor), disclose a message distribution process which based on deterministic rules is capable of equally (difference is less than 25%) distributing load across multiple processor in a network environment (See column 4, lines 55-65)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to evenly distribute load across multiple processor in order to minimize traffic congestion from multiple sources at multiple outgoing processor where the traffic arrive randomly (See column 1, lines 10-15)

With respect to claim 16 and 17

Delaney as modified by Grewal teaches the limitation of claim 15 for the reason above

Delaney further teaches said second value represents an OPC (Originating Point Code) value, and first value represents a Signaling Link selection (SLS) (See column 4, lines 10-14, where message comprise a SLS value and a OPC value)

With respect to claim 18 and 19

Delaney teaches the limitation of claim 15 for the reason above.

Delaney does not teach said mathematical function ensuring that a load on any CPU in said multi-CPU receiving node differs neither by no more than 5% nor 2%when sampled over a continuous 24-hour period from a load on any other CPU in said multi-CPU receiving node that is designated for load sharing SCCP message processing,

Grewal, which is in the same field of endeavor, (System for load balancing between message processor), disclose a message distribution process which based on deterministic rules is capable of equally (difference is less than 5% and 2%) distributing load across multiple processor in a network environment (See column 4, lines 55-65)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to evenly distribute load across multiple processor in order to minimize traffic congestion from multiple sources at multiple outgoing processor where the traffic arrive randomly (See column 1, lines 10-15)

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement N. Tedom whose telephone number is (571) 270-01827. The examiner can normally be reached on Monday-Friday, 7:30-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571) 272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.